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2001

1971

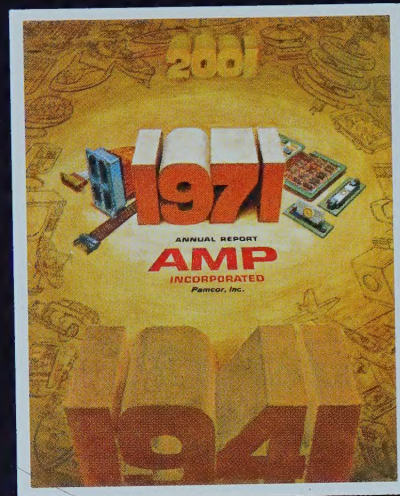
ANNUAL REPORT

AMP

INCORPORATED

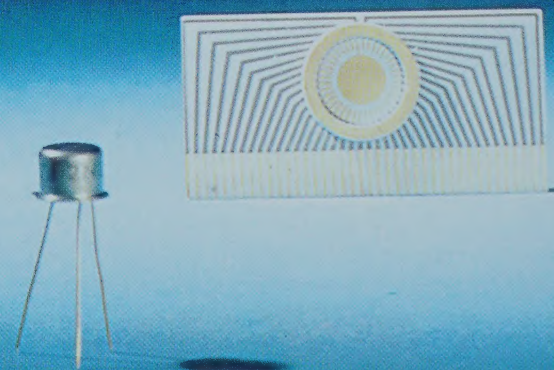
Pamcor, Inc.

1974



1941-1971/AMP'S 30TH Anniversary

At the halfway point from its formation in 1941 to the year 2001, AMP can look back on the emergence of many new markets—and ahead to the likelihood of many more in the next 30 years. Most of AMP's 1971 sales were products used in types of customer equipment that did not exist in 1941. The computer industry is a good example. The picture shows a portion of one of the first electronic computers ever built. Begun during World War II, it was huge and slow because it relied on vacuum tubes. The transistor made dramatic size and power reductions possible in the Fifties, and a new industry was born—which AMP began serving with new products that are still in use today. The further miniaturization or "integration" of circuitry during the Sixties and early Seventies provided opportunities for more new AMP products and brought the size reduction down to well over 100 to 1—making computers even smaller, faster, and more reliable—and thus more versatile. As a result, the use of computers is expanding throughout modern society and offers an ever-broadening market for AMP products.

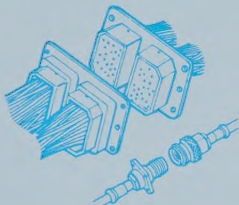


Corporate Profile

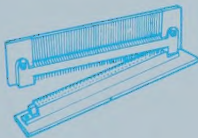
PRODUCTS



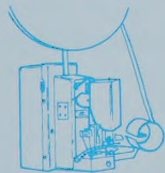
Terminals & Splices



Connectors



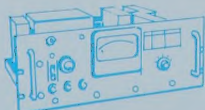
Interconnection Systems



Tooling



Programming Systems



"Power Packages"

GENERAL—AMP Incorporated, founded in 1941, has its headquarters in Harrisburg, Pennsylvania. It has a Puerto Rican manufacturing affiliate, Pamcor, Inc., owned by identical shareholders. AMP now has 14 wholly owned subsidiaries: marketing companies in the United States and Canada; and manufacturing and sales subsidiaries in Latin America, Australia, Japan and seven European countries—France, Great Britain, Holland, Italy, West Germany, Spain and Sweden 1

HIGHLIGHTS AND FINANCIAL DATA 2

LETTER TO SHAREHOLDERS—Sales up 6% to a record \$240 million; net income up 2% to a new high of \$25.0 million or \$2.04 per share, including 8¢ currency revaluation gain. 3

FINANCIAL—At December 31, 1971, assets of \$205.8 million, long-term debt of \$12.6 million and shareholders' equity of \$138.3 million 4

OPERATIONS—The major portion of AMP's research, engineering and domestic manufacturing facilities are within a fifty-mile radius of its General Offices at Harrisburg, Pennsylvania. Other operating facilities are located in North Carolina, Florida, and at the various subsidiary locations. Total employees 10,306 5

MARKETING—Throughout the world, AMP products are marketed directly to thousands of customers for use in the manufacture, maintenance and repair of the products and equipment of most industries. Over 50,000 customers in widely diversified electrical/electronic markets are served worldwide 6

MARKETS—Aerospace & Military Electronics 7
 Commercial & Industrial Electronics 8
 Computers & Data Processing 10
 Consumer Goods 12
 Transportation & Electrical Equipment 14
 Maintenance & Repair, Utilities, Construction 16

PRODUCTS—AMP is a leading producer of solderless terminals, splices, multiple and coaxial connectors, packaging and interconnection devices, and other electrical devices—and the application tooling to attach these devices to wires or circuit boards. It also produces programming systems, capacitor products, and other electronic components. There are over 35,000 types and sizes of AMP products . . . 18

FINANCIAL STATEMENTS—All statements and statistics, unless otherwise noted, include AMP Incorporated, its affiliate, Pamcor, Inc., and their subsidiaries. 24

CORPORATE DATA 28

Highlights and Financial Data

(Dollars in thousands)

	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962
For The Year—										
NET SALES	\$239,648	\$225,827	\$211,256	\$167,172	\$146,469	\$141,817	\$110,942	\$91,676	\$82,835	\$73,233
COST OF SALES	139,215	127,062	116,516	95,612	85,813	81,072	62,000	50,322	45,987	39,245
GROSS INCOME	100,433	98,765	94,740	71,560	60,656	60,745	48,942	41,354	36,848	33,988
SELLING & GENERAL, ETC.	55,289	53,932	47,363	40,251	37,254	33,281	26,426	22,586	20,796	18,743
INCOME BEFORE INCOME TAXES AND GAIN ON REVALUATION	45,144	44,833	47,377	31,309	23,402	27,464	22,516	18,768	16,052	15,245
INCOME TAXES	21,084	20,344	23,097	15,082	9,749	12,439	10,068	9,045	7,510	7,471
INCOME BEFORE GAIN ON REVALUATION	24,060	24,489	24,280	16,227	13,653	15,025	12,448	9,723	8,542	7,774
GAIN ON REVALUATION OF FOREIGN CURRENCIES, NET	965	—	—	—	—	—	—	—	—	—
NET INCOME	\$ 25,025	\$ 24,489	\$ 24,280	\$ 16,227	\$ 13,653	\$ 15,025	\$ 12,448	\$ 9,723	\$ 8,542	\$ 7,774
Per Share*	\$2.04	\$2.00	\$1.98	\$1.33	\$1.12	\$1.23	\$1.02	80¢	70¢	64¢
CASH DIVIDENDS										
	\$ 7,859	\$ 7,110	\$ 5,875	\$ 4,887	\$ 4,391	\$ 3,652	\$ 3,037	\$ 2,729	\$ 2,423	\$ 2,119
Per Share*	64¢	58¢	48¢	40¢	36¢	30¢	25¢	22¢	20¢	17¢
CAPITAL EXPENDITURES	15,034	23,271	17,562	8,465	15,977	17,136	11,817	6,195	7,891	5,141
DEPRECIATION	11,451	10,361	9,452	8,497	6,966	5,609	4,178	3,615	3,070	2,696
At December 31—										
WORKING CAPITAL	\$ 86,474	\$ 71,807	\$ 65,823	\$ 56,390	\$ 46,022	\$ 35,257	\$ 28,645	\$26,513	\$21,645	\$19,398
PROPERTY, PLANT AND EQUIPMENT, NET	68,439	65,614	53,379	46,086	47,068	38,713	27,543	20,125	17,839	13,165
LONG-TERM DEBT	12,603	12,346	11,537	13,535	15,534	6,200	400	500	600	700
TOTAL DEBT	22,176	23,627	20,314	19,830	20,498	14,672	3,380	2,046	2,123	1,406
SHAREHOLDERS' EQUITY	138,285	121,409	104,031	85,597	73,741	64,283	53,026	43,671	36,660	30,501
BACKLOG										
	\$ 42,900	\$ 43,300	\$ 41,100	\$ 34,500	\$ 29,000	\$ 30,400	\$ 22,900	\$18,900	\$15,700	\$14,600
SHARES OF STOCK OUTSTANDING*	12,289	12,268	12,252	12,226	12,206	12,172	12,149	12,134	12,120	12,103
NUMBER OF EMPLOYEES	10,306	10,426	10,171	8,785	8,260	8,735	7,100	6,050	5,400	5,092

* Based on weighted average shares outstanding after retroactively giving effect to the 2-for-1 stock split in 1967.
The gain on revaluation in 1971 was 8¢ per share.

Mr. J. D. Brenner, President and Chief Executive Officer (left), Mr. U. A. Whitaker, Chairman (middle), and Mr. S. S. Auchincloss, Vice Chairman of the Board, inspecting a new type of AMPOMATOR machine.



To the Shareholders

Sales rose 6% to a new high of \$239.6 million, with increases in both domestic and international operations. This compares with \$225.8 million in 1970. Earnings were up 2% to a new high of \$25.0 million or \$2.04 per share. Reflecting economic conditions, both in the U.S. and abroad, our growth in 1971 was below our long-term average. Earnings include an 8¢ extraordinary gain from the upward revaluation of major currencies in relation to the dollar, and the consequent translation of the current assets and the liabilities of our international subsidiaries at the new higher exchange rates.

The year-end 1971 backlog of unfilled orders of \$42.9 million was down from \$43.3 million at year-end 1970, but is up from \$40.6 million at September 30, 1971.

A number of organizational changes occurred in the past year. J. D. Brenner was elected a Director, as well as President and Chief Executive Officer. He has been with AMP for nearly 25 years, principally in the engineering and manufacturing areas. S. S. Auchincloss, former President and Chief Executive Officer, will continue as Vice Chairman of the Board, but on a less active basis. In other changes, C. J. Fredricksen is now Chairman of the Finance Committee, W. C. Lange is Senior Vice President—Merchandising, W. F. Raab was elected Vice President and continues as Treasurer, and W. B. Conner was appointed Divisional Vice President, Industrial Sales.

The resignation of G. A. Ingalls from the Board, for reasons of health, was accepted with great regret. His contribution since the Company's founding was immeasurable. An Officer and Director since 1957, he served successively as Vice President—Controller, Executive Vice President, President and Vice Chairman. He will continue as a Director Emeritus.

The resignation of C. L. Keister, an AMP Director for 15 years, was also accepted with regret. Mr. Keister will also continue as a Director Emeritus. Concurrently, E. M. Green, Chairman of Dauphin Deposit Trust Company in Harrisburg, was elected to the Board.

During 1971, F. E. Howell retired as Divisional Vice President, Industrial Sales, and F. S. Kugle resigned as Vice President, Administration. Both will be available in advisory capacities.

AMP's product and market scope continues to widen as we expand our role in the automotive, communications,

and many other fields. We are developing new switches, creating special flexible etched circuitry, designing more data input terminals, releasing a new connection technique for the building industry, introducing new methods of wrapping and connecting pipes, as well as exploring the medical field. We are carefully working outward from a core of capabilities that have broad application, not only to electrical connection devices, but to many other product areas as well. Expanding our international operations, we established our first subsidiaries in South America. Located in Argentina and Brazil, they give us a direct entry into new markets in that area.

Our long-standing emphasis on providing customers with application tools and machines has been a vital factor in our success. Starting with a very simple hand tool in 1941, we now have a wide range of tools and machines—including complex, tape-programmed, numerically-controlled machines. Using a "systems" approach, we conduct parallel development of both the connection device and the application tooling to provide customers with complete solutions to their connection problems. As customers' labor rates, volume of connections, and the need for precision and reliability rise steadily, we continue to strengthen this important capability.

We are optimistic about 1972. Domestically, we see further improvement in our business. Internationally, we expect an upturn in business which, however, may not occur to any great extent until later in the year.

We thank all those employees, customers and suppliers who have contributed to our success in the first 30 years. With their help, we look forward to continued growth in the future.

Sincerely,

U. A. Whitaker
Chairman of the Board

S. S. Auchincloss
Vice Chairman of the Board

J. D. Brenner
President and
Chief Executive Officer

March 3, 1972
Harrisburg, Pa.

Financial

AMP'S FINANCIAL POSITION continued to strengthen in 1971. We increased working capital substantially, invested a significant amount in capital expenditures, paid out record dividends, and increased shareholders' equity—while decreasing total debt moderately.

Working capital rose to \$86.5 million, an increase of 20%, and the current ratio improved to 2.7 to 1 from 2.5 to 1.

Total cash and marketable securities showed a sizeable increase, while total debt, both short- and long-term, decreased \$1.5 million to \$22.2 million, and is now equivalent to 16% of shareholders' equity. Shareholders' equity increased by 14% to \$138.3 million, principally through the reinvestment of earnings. We do not anticipate a need for new domestic debt or equity financing.

During 1971, the revaluation of most major currencies in relation to the U.S. dollar, and the consequent translation of the current assets and the liabilities of our international subsidiaries at the new higher exchange rates established in December, 1971, resulted in an extraordi-

nary net gain of \$965,000 or 8¢ per share. In accordance with generally accepted accounting principles, fourth quarter 1971 sales and operating net income reflect the higher rates which will, of course, continue to be used during 1972.

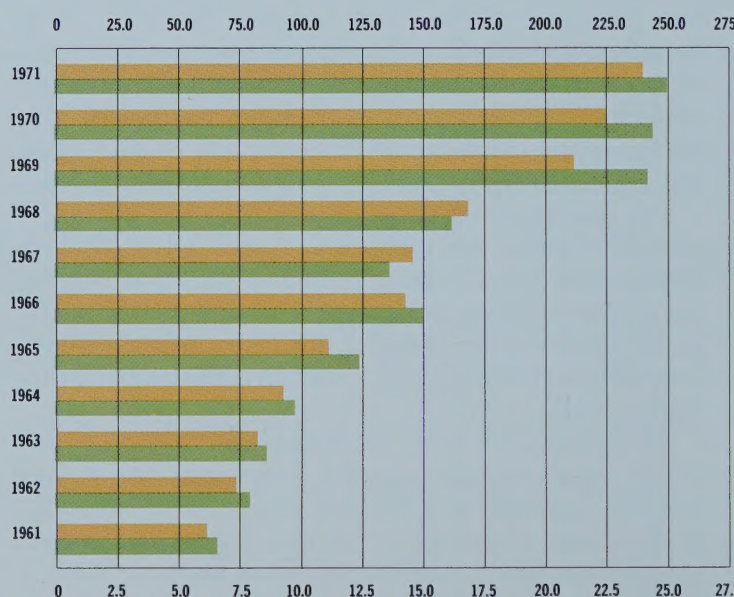
CAPITAL EXPENDITURES of \$15.0 million were well below the record \$23.3 million in 1970. With a continued rise in equipment spending and increased expansion of facilities, capital expenditures are expected to rise again in 1972. They should surpass 1971, but may not reach 1970 levels.

DIVIDENDS—The quarterly cash dividend of 16⁵/₈¢ per AMP Endorsed Share payable March 1, 1972, to shareholders of record on February 7, 1972, indicates an annual rate of 66¹/₂¢ per share compared to 64¢ per share in 1971. This is the maximum increase allowable under the Phase II controls and is the nineteenth consecutive annual increase. For thirteen consecutive years prior to this, the dividend was increased more than 10% each year.

How the 1971 Sales Dollars were used

39.4%—Wages, salaries and employee benefits . . .	\$94,343,000
35.7%—Materials and services, etc.	85,485,000
4.8%—Depreciation	11,451,000
9.7%—Taxes—income and other	23,344,000
3.3%—Cash dividends	7,859,000
7.1%—Reinvestment in the business	17,166,000
100%	Total \$239,648,000

Sales \$ IN MILLIONS



Net Income \$ IN MILLIONS

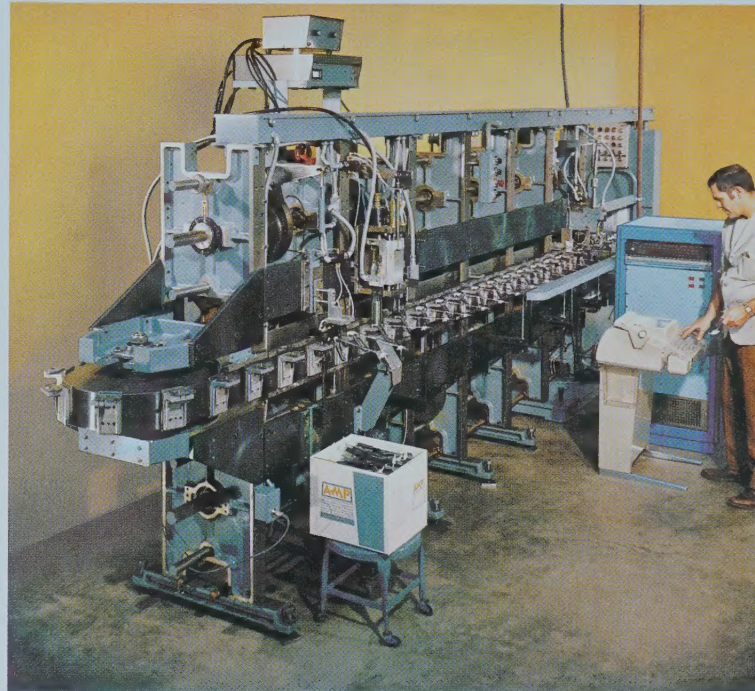
Operations

Although 1971 was a year of modest sales growth, substantial progress was made in several areas. Consistent with a long-term trend of increased sales per employee, a sales gain of 6% was accomplished while the total number of employees remained nearly level. We expect production levels to rise further in 1972, particularly in domestic operations. As they do, we will cautiously begin adding people—not only more production workers for greater immediate output, but also more engineering, marketing, and administrative personnel to ensure further growth in the future.

Physical expansion continued, although not at as fast a pace as in 1970. Floor space rose over 6% to a record 3,200,000 sq. ft. Along with a number of smaller additions, new plants began operations in Tower City, Pennsylvania; Las Piedras, Puerto Rico; Buenos Aires, Argentina; Turin, Italy; and Barcelona, Spain.

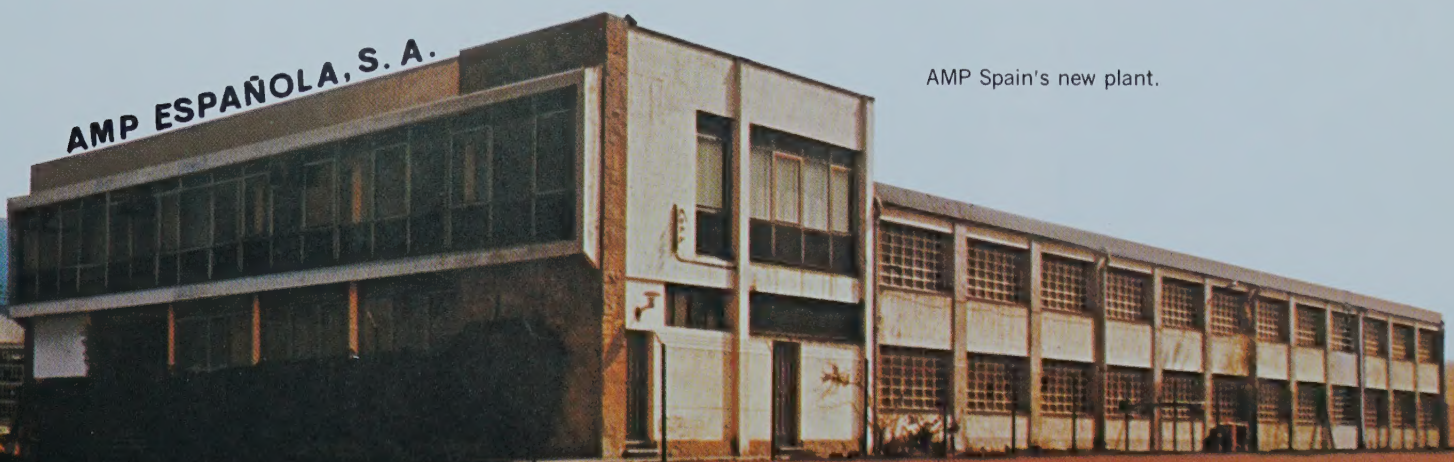
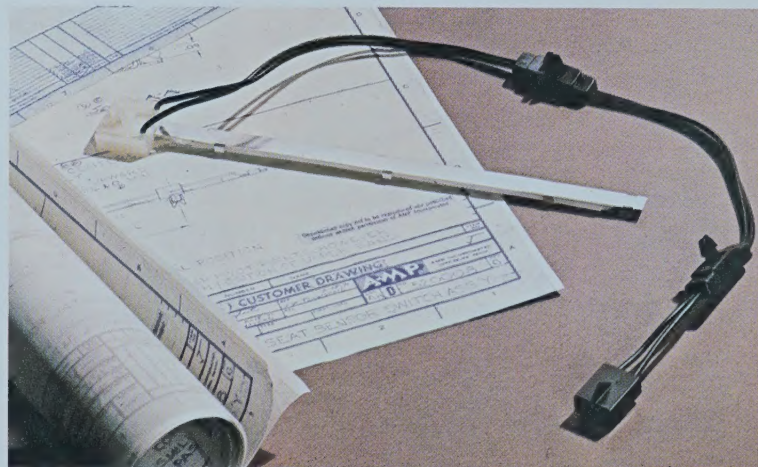
The largest portion of 1971 capital expenditures is related to additional equipment within our facilities. As our products become more complex and precise, they require more extensive equipment for research, test, production and quality control. In addition, more equipment is also required to comply with rising government standards on air and water pollution, waste disposal, noise, safety and health. Fortunately, however, with our type of operations we expect to be able to continue staying well above minimum standards without incurring the large expenditures faced in some industries.

Another influence on our equipment expenditures is our intensive search for ways to reduce labor costs in our production operations. The automotive switch assembly machine shown on this page is indicative of the trend toward more advanced equipment. Monitored by a mini-computer, it provides constant in-process control of quality. This complex installation is just one step further in our broad program to automate our operations wherever feasible.



Computer-monitored AMP production machine for automated assembly of automotive seat sensing switches.

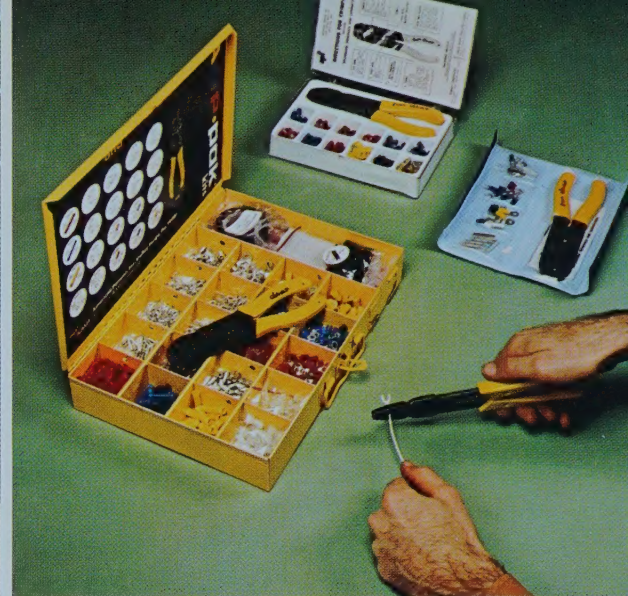
Sensing switch for a seat belt warning system.



AMP Spain's new plant.



An AMP marketing specialist instructing General Electric Medical Systems Division personnel on the recently installed AMP TERMI-POINT machine.



Some of the standard kits offered to maintenance and repair users.

Marketing

The pictures above are indicative of the dual aspect of our marketing. Five of our six markets are original equipment manufacturers or "OEM's". The sixth is the non-manufacturers—the maintenance and repair users, the utilities, and the building and construction field. Each of these six broad categories is actually comprised of a number of specific markets, which gives us great diversity and a measure of stability.

To penetrate these markets as effectively as possible, we have consistently relied on the direct sales approach. Both in the U.S. and in markets served by our subsidiaries in other countries, two separate sales forces are used because of the quite different needs of the manufacturers and the non-manufacturers.

Our approach to over 10,000 OEM customers worldwide is characterized by many long-standing working relationships. Through close liaison, we try to learn of their requirements at an early stage so we can develop new products and application tooling as needed. Over 300 highly trained sales engineers throughout the world—like the one shown above at General Electric—are involved in this process. They are backed up by a force of over 100 field service engineers who assist our customers in making efficient use of AMP application machines.

Recognizing the accelerating change in the technological environment, we have taken several steps to ensure continued effectiveness of the product development capability that has been so vital to our growth. For example, in the U.S. we added several product-oriented groups within our marketing organization to help focus and speed up our product creation efforts. We have also launched marketing programs aimed at the special problems of specific industries such as the AMP MODULATION program for the appliance industry. Internationally, our subsidiaries are expanding their engineering capabilities in order to participate more fully in the special new product opportunities of their specific markets.

The maintenance and repair kits shown above are just one small facet of a broad program serving tens of thousands of "M & R", utility, and construction customers. Our growing involvement with the utilities and the building and construction field is described on pages 16 and 17. As with our OEM sales, we rely primarily on a direct sales force. In the U.S. we have a separate marketing subsidiary with over 500 personnel (American Pamcor Inc.), while internationally we use separate M & R marketing groups, called AMPLIVERSAL divisions, within our wholly owned subsidiaries.



AEROSPACE AND MILITARY ELECTRONICS

Commercial Aircraft • Business and Private Aircraft • Air Traffic Controls • Avionics • Military Communications • Missiles • Defense Systems • Space Vehicles • Ground Support Equipment • Oceanography.

Although AMP terminals and splices have been standard in airplanes since the early Forties, it was not until the Sixties that we began to broaden our product participation to any great degree. The growing complexity of the airframe and of avionic equipment gave rise to many new connection requirements that prompted extensive AMP product development work.

Today, we have many types of products specified on the aircraft of the Seventies. The products shown below are some of the many AMP devices used in the six planes shown. Virtually all of the western world airplanes—commercial, business and private, military, and experimental types—use many of the same AMP components. These products range from relatively simple terminals

and splices to terminal junction systems, multiple connectors, coaxial cable connectors, packaging and interconnection devices, and special power supplies. Our development work on new connections continues. We are working with conductors and systems that can offer aerospace manufacturers space, weight, and labor savings—for example, special connections for thin-wall insulation wires, aluminum wire and cable, flat flexible cables, microstrip, and multiplex systems.

Concurrent with product development, we continue to pioneer in application tooling, such as the portable tape-fed machine shown, that can provide customers with labor-saving, reliable methods of making connections.

Boeing 747



McDonnell Douglas DC-10



Lockheed TriStar



Concorde



A300B European Airbus



European MRCA

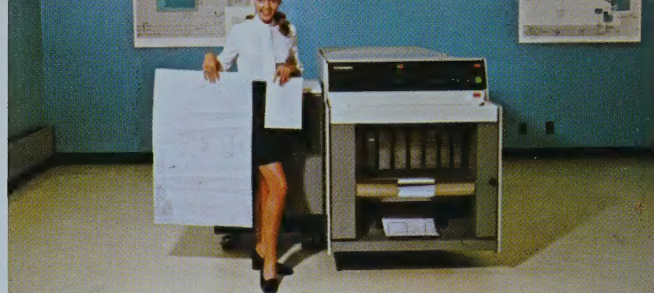


Some of the AMP products used in the planes at right.
(Background—An AMP-TAPETRONIC tape-fed machine.)



COMMERCIAL AND INDUSTRIAL ELECTRONICS

Office Equipment • Business Machines • Communications • Numerical Controls • Production Control Systems • Process Controls • Instrumentation • Test Equipment • Medical Equipment • Educational Equipment • Security Systems • Credit Systems • Quotation Systems.



Xerox 840 Engineering Print System

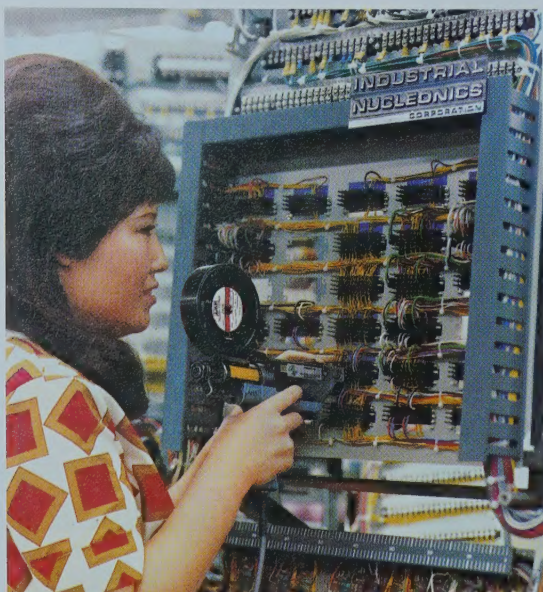
The market category we describe as Commercial and Industrial Electronics is a collection of a number of separate, yet interrelated fields—in effect, all electronics that are not otherwise classified as aerospace, military, or computer. As a result, new markets are constantly arising within this category as the use of electronic equipment continues to spread throughout modern life. The three fields specifically referred to on these pages—process automation, medical electronics, and office copying equipment—are good examples of this. Today they are sizeable, fast-growing markets, yet 10 years ago they were quite small and 20 years ago did not really exist commercially.

In seeking the advantages of point-to-point wiring, the three customers referred to here—leaders in their respective fields—have all turned to AMP TERMI-POINT wiring devices. A TERMI-POINT pneumatic application tool is shown below at Industrial Nucleonics making connections on the AMP connectors in their AccuRay Process Automation System. When the volume of connections is great and the pattern of wiring repetitive, an AMP TERMI-POINT fully automatic, tape-programmed machine may be advantageous. On page 6 we show the TERMI-POINT machine recently installed at General Electric's Medical Systems Division to wire connector panels on

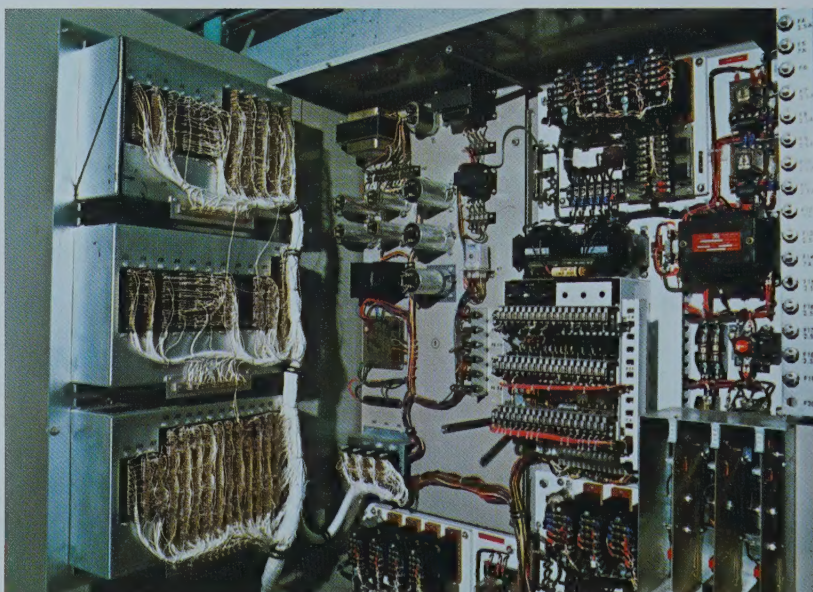
their Telegem 90 Remote Control Diagnostic X-Ray System. A section of this complex equipment is shown below.

Usually we provide the connectors and the application tooling to a customer so he can assemble and wire the panels in his plant. But customers also make use of another AMP service. Taking the customer's specifications, we will provide the connector "hardware" and completely assemble, wire and test the panels—delivered ready for final installation in his equipment. The panels shown in the picture at the right are a good example of this increasingly important AMP capability.

Several other fields in this category are also expected to provide us with good growth opportunities during the Seventies. The telephone systems of the world are in urgent need of modernization and expansion and will require much new electronic equipment in the next decade. In addition, other types of communication systems are also arising. Similarly, new information systems are being created each year. Stock quotation, retail and bank credit, hospital, production and inventory control and many other types of systems are springing up constantly as our world becomes more complex, data gets more voluminous, and labor costs keep rising.



AMP TERMI-POINT pneumatic tool used by Industrial Nucleonics to terminate AMP connectors.



AMP connectors in the General Electric Telegem 90 Diagnostic X-Ray System.



AMP products used in the Xerox 840 Engineering Print System, Industrial Nucleonics AccuRay, and G E Medical Systems Division X-Ray equipment. (Background—An AMP TERMI-POINT machine.)



COMPUTERS AND DATA PROCESSING

Digital Computers • Analog Computers • Hybrid Computers • Data Entry Equipment • Printers • Data Converters • Visual Displays • Input/Output Terminals • Time-Sharing Equipment.

The AMP products shown at the right provide virtually all of the connections in the Control Data Corporation 711 CRT display terminal shown below. The terminal is part of the CDC 710 Series computer peripheral equipment system in which remote-station, data display terminals and printers can interact with a central computer.

The AMP products in the CDC 711 are typical of what we are now supplying to the computer industry. The flexible circuitry shown in the foreground is one of the first major customer uses of a new AMP product family. We developed this unique sawtooth configuration of shielded cable to permit layers of circuitry to be closely sandwiched together while minimizing "crosstalk." The AMP machine shown below in a Control Data plant is applying AMP contacts to this cable. The contacts are then inserted into housings to form multiple connectors that plug into other AMP connectors mounted on printed circuit boards. The AMP flexible circuitry assembly thus provides a very effective means of linking successive layers of rigid printed circuit boards. This new AMP prod-

uct line is described further on page 21 where we show a number of different configurations we have created.

This new Control Data display terminal system is indicative of what is happening in the computer field. While growth is expected in the number of central processing units installed in the future, much faster growth is expected in the widening array of peripheral equipment being developed to make computers more useful by increasing their data inquiry, storage, retrieval, and display capabilities. We are providing connection products to nearly every computer main frame and peripheral equipment manufacturer. The continual evolution of electronic circuitry and successive generations of equipment provide many product development opportunities for AMP. For example, we expect that as circuit integration continues, new packaging devices and miniaturized connectors such as those shown on page 19 will find use in the computer industry.

On the inside front cover of this report we show the dramatic contrast between early computer vacuum tube circuitry and the latest integrated electronic circuitry. Perhaps 30 years from now, present circuitry will appear as obsolete. If it does, AMP will have had a hand in bringing about this evolution through the development of new packaging and interconnection devices that make new circuitry useable.

Control Data Corp. 711 CRT display terminal.



An AMP application machine used by Control Data to terminate AMP flexible etched circuitry.





AMP products used in the Control Data 711 CRT display terminal.
(Background—An AMP multi-head pantagraph application machine.)



CONSUMER GOODS

TV • Radio • Stereo • Tape Recorders • Organs • Washers • Dryers • Dishwashers • Refrigerators • Freezers • Air Conditioners • Humidity Controls • Portable Heaters • Small Appliances • Power Tools • Garden Equipment • Vending and Amusement Equipment.

It is interesting to look back 30 years and see how many of the electrical and electronic consumer goods items we take for granted today did not exist then. In the appliance industry the dishwasher, room air conditioner, microwave oven, trash compactor and a myriad of smaller appliances have been created—with no end in sight. In home entertainment equipment, only the radio and the phonograph would look somewhat familiar. The TV, stereo, electronic organ, audio tape recorder, and, quite recently, the video tape recorder have appeared on the scene. The home of the future is expected to have a complex entertainment and communications system.

Since our early years we have provided connection devices and application machines to virtually every manufacturer of appliances and home entertainment goods so they can make connections faster and more reliable. For example, in the appliance industry, AMP FASTON and other terminals, harness connectors, and AMPOMATOR machines are used extensively in the mass production

of wiring harnesses. Quite recently we began our AMP MODUMATION marketing program to show the appliance industry how existing and proposed AMP connection and switching devices—along with AMP application machines—can help them convert to modular construction and even more automated application methods.

In the TV, stereo and electronic organ fields, AMP connection devices and special automated application equipment are already in widespread use in the U.S. and in other countries to facilitate modular construction. The customer equipment shown below is all modularized in one manner or another. The AMP products at right are a sampling of what is currently in use in the specific equipment shown here.

With the rising standards of living throughout the world, growing populations, and the seemingly limitless ingenuity of our customers in creating new equipment, we expect the consumer goods field to continue as a good growth market for AMP. Higher labor rates, concern with safety and serviceability, increasing use of integrated circuitry and new types of conductors, and the mounting complexity of equipment all point to a continuing need for AMP's unique capabilities.



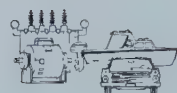
- (a) Hitachi TV.
- (b) Tandberg tape recorder (Sweden).
- (c) Matsushita electronic oven.
- (d) BRC stereo (Great Britain).
- (e) G.E.C. (Radio & Television) Ltd. TV (Great Britain).



Some of the AMP products used in the consumer goods equipment shown at left.
 (Background—Reels of AMP machine-applied contacts.)



Ford



TRANSPORTATION AND ELECTRICAL EQUIPMENT

Motors and Generators • Compressors • Refrigeration, • Heating and Air Conditioning Equipment • Lighting Equipment • Transformers • Coils and Relays • Automobiles • Trucks • Recreational Vehicles • Busses • Rail and Rapid Transit Equipment • Farm Equipment • Materials Handling Equipment.



Chrysler



GM



VW



Fiat



Toyota



Datsun

As anyone who reads the daily papers knows, the automotive industry is receiving much attention because of widespread concern with pollution, safety and reliability. When added to the long-established trend toward more use of electrical circuitry in cars, a proliferation of electrical and electronic devices will apparently be emerging in the Seventies.

We expect to play a growing role as a supplier of connectors and switches to the automotive industry. We are placing increased emphasis on the development of special connection and switching devices for use on new systems such as emission control, electronic ignition, anti-skid, seat belt warning, and diagnostic equipment. We are providing a number of products to the U.S. car producers. On page 5 we show one aspect of our participation in the Ford seat belt buzzer warning system. Overseas, we are the leading supplier of automotive connection devices. The facing page shows some of the products used in the European and Japanese cars shown on this page. In the foreground are newly developed connectors for use with diagnostic equipment and emission control devices.

As the number of automobiles produced and the number of connections per car rise steadily along with the cost of labor, there is a growing need for more automated connection application methods. While there are many AMP automatic wire leadmaking machines already at work in this industry, both the number and capabilities of this equipment are expected to increase in the Seventies.

Another growth area we have found recently is the recreational vehicle industry. There has been an amazing rise in the number of travel and camping trailers, self-contained vehicles, snowmobiles, all-terrain vehicles, dune buggies, motorcycles, trail bikes, electric carts, etc.—with a concurrent rise in the number of terminals, splices and connectors they need.



Some of the products used in VW, Fiat, Toyota, and Datsun cars.
(Background—An AMP automatic leadmaking machine.)



MAINTENANCE & REPAIR, UTILITIES, CONSTRUCTION

Airlines • Bus Lines • Trucking Companies • Railroads • Shipyards • Industrial Plant Maintenance • Repair Shops • Contractors • Federal, State & Local Government • Electric Power Companies • Telephone Companies • CATV • Gas Companies • Resale Organizations

Although we have over 10,000 customers who manufacture electrical and electronic equipment, many more use AMP products in the maintenance and repair of that equipment. As equipment throughout the world constantly grows in number and complexity, the scope of AMP products sold to these customers has grown accordingly. Today nearly every product sold to equipment manufacturers is also made available to them.

In the mid-Sixties we began serving the utility companies with products developed for their special needs. As part of our increasing emphasis on the telecommunications field, we provide many telephone utilities throughout the world with PICABOND splices and tools for splicing telephone transmission cable. Recently we introduced another family of telephone cable connection products shown on page 20. For electric power utilities, we have a widening range of AMPACT connectors and tools based on an approach in which a powder cartridge provides the connection force. For gas utilities, we developed AMP-FIT fittings used in the gas industry.



AMP receptacles were used in this experimental house developed for the HUD Operation BREAKTHROUGH program by the NAHB Foundation Inc., subsidiary of the National Assoc. of Homebuilders.

and pipes such as those shown below used in providing service from street mains to customer meters.

At right is our first electrical connection product designed specifically for the building and construction industry. It offers a faster, more reliable and more economical method of connecting wall and ceiling receptacles and switches. Using a special AMP tool, the three conductors in the cable are separated (bottom) and then laid in place in the receptacle (middle). Using a different portion of the same tool, the rear retaining plate is pressed on—forcing the conductors onto the self-stripping contacts. This method was used in wiring the experimental house shown above. Studies show this new method takes less time, uses less cable, produces more consistently reliable connections than existing methods, and eliminates the need for a mounting box. While this product has application throughout the building industry, our initial marketing emphasis is on the high volume wiring needs of the mobile home industry where there is great interest in new production wiring methods.

AMP-FIT fittings used in the gas industry.





Installing an AMP duplex receptacle on electric cable used in building wiring.
(Background—AMP hand crimping tools.)

Product Review

After 30 years of developing new electrical connection devices, AMP now has tens of thousands of product part numbers. While this would seem sufficient to meet any connection requirement, products are being created today faster than ever before. If the past is any guide, the next 30 years will see the number of connection devices rise many times over. New connection requirements are steadily arising — customers are constantly creating new types of equipment as well as continually redesigning existing equipment to incorporate the latest technological advances. Miniaturization of circuitry devices, improvements in various components, use of new conductive and insulating materials, different environmental conditions, higher reliability standards—these are a few of the design factors generating new connection needs. Added to this is the pressure of rising labor rates and the growing complexity of equipment, which make modular design and automated production increasingly necessary.

Accordingly, we will continue to concentrate our main efforts on electrical and electronic connection problems. We think the opportunities in this field are as good as ever before, and that it can continue to be our main avenue of growth. A few of the newest types of connection devices are shown on pages 18–20.

However, to supplement that growth, we are carefully adding related products that use most of the same capabilities but take us into other growth areas. This broadening out process is highly selective to ensure a logical extension of our abilities in a step-by-step manner. Some of our current efforts on this are shown on pages 21–22.

Along with product technology advances such as these, similar progress is being made on the applying tools

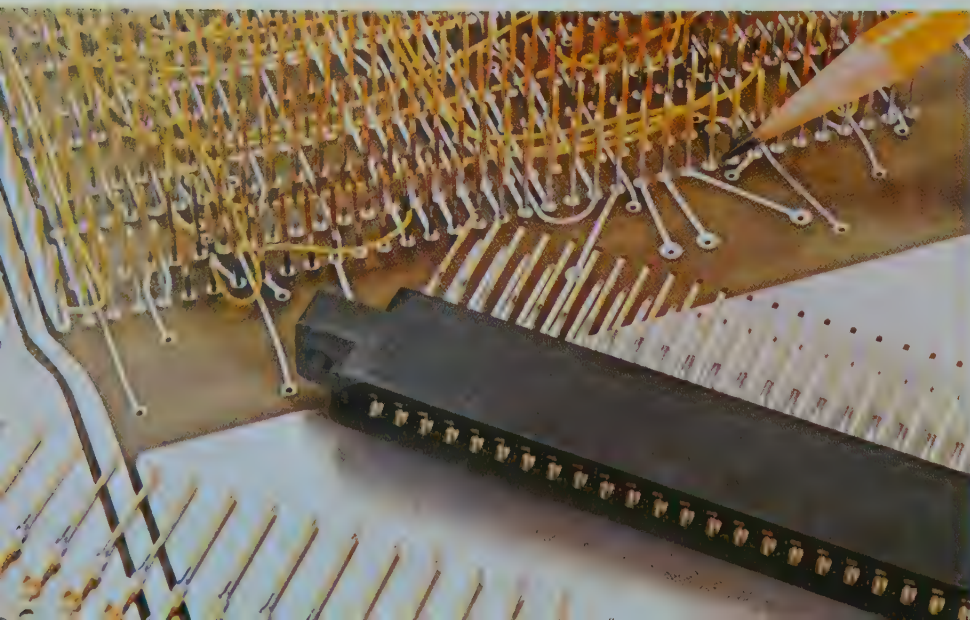
and automated machines we provide to customers. This is described on page 23.

In 1971, \$24,000,000 (10% of sales) was spent on research, development and engineering for the creation and application of new and improved products and processes. At year-end 1971, nearly 1,600 U.S. and over 8,000 corresponding patents in 38 other countries were issued or pending.

New Techniques—In addition to the many projects aimed at specific customer requirements, the development of new products also involves applied research to find new techniques or processes that can benefit customers generally. For example, with our new *Select Solder Deposit Technique*, the connection posts shown below, were installed quickly and reliably by very accurately pre-depositing solder on the posts for later “reflow” into place automatically under heat. It permits hundreds, or even thousands, of posts to be installed in a wiring panel at one time without damaging plated-thru holes or leaving any stray solder. Another development is a graphite coating for contact surfaces that dramatically increases the wear life of mating surfaces and reduces insertion and withdrawal forces. Still another example is our work on *filters of various types, such as the ones shown below*, which can minimize or prevent electromagnetic interference in high-frequency circuits.

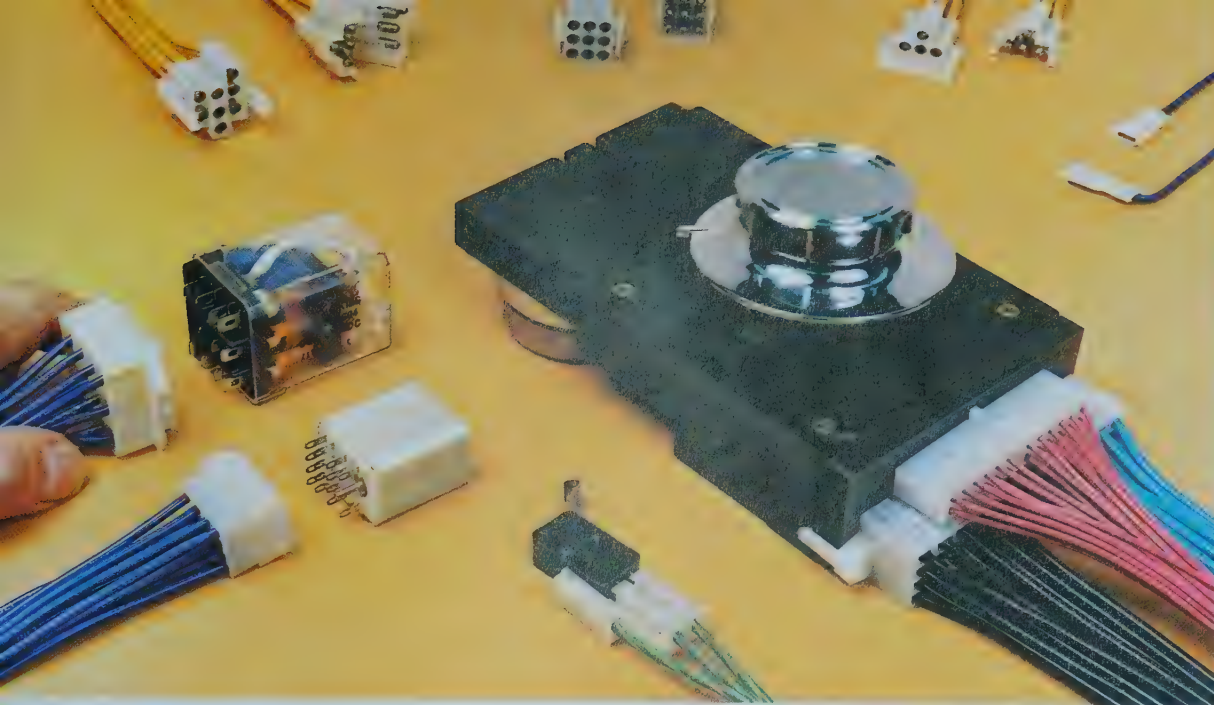
Multiple Connectors—The harness connectors at upper right are part of a new family designed to mate directly with specific, widely used components such as timers, relays, and switches. They offer labor savings because the connectors are an integral part of the machine-applied wiring harness.

Select Solder Deposit Technique.

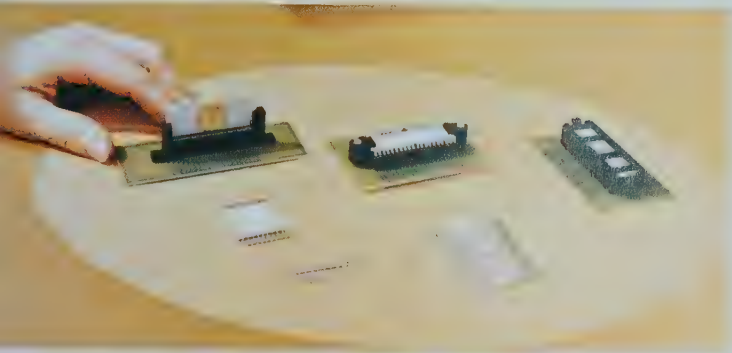


Filters for reducing interference in high-frequency circuits.





Harness connectors that permit direct pluggability of timers, relays and switches.



Packaging devices for leadless substrate integrated circuitry.

The input/output connectors at lower right are some of the new types of multiple connectors with miniature-size contacts to handle the greater circuit densities increasingly common in today's electronic equipment. They range from high reliability connectors for avionic equipment to low cost versions for commercial electronics, and offer either hand tool or machine application.

Electronic Packaging and Interconnection Devices—The electronic packaging devices shown above provide pluggable connections for some of the latest types of integrated circuitry units—leadless ceramic substrates. Instead of fragile projecting metal leads, these circuitry units have flush contact pads that mate directly with the receptacle contacts in these special board-mounted connection devices. Another area of increasing importance is *wiring interconnection panels*, such as the ones shown on pages 9 and 18. We are, therefore, steadily broadening our capabilities to meet the need for increasingly complex panels. We are also expanding our activity in lead frames for integrated circuitry manufacturers through a greater variety of configurations and unique approaches that facilitate bonding of the chip to the lead frame.

New input/output connectors with miniature-size contacts.





Connectors and application tooling for 25-pair telephone cable.



AMP-TY wire bundling straps.

Communications Industry Connectors—*The telephone cable connectors shown above* are one part of our broad effort to develop new connection products for the communications equipment of the Seventies and Eighties. This huge, fast-growing field has an urgent need for new techniques that will make connections faster, less expensive, and yet more reliable. This particular AMP product family uses contacts that penetrate through the wire insulation as the wire is pushed down on the contact. The connector on the left is used on the 25-pair cable on the familiar telephone handset. Termination of the 50 wires into the connector is done with uniform reliability by an AMP semiautomatic tool or a field service tool in much less time than required by the prevalent solder method. In addition, the service tool permits easy changes or repairs, in contrast to cutting off and disposing of the solder type connector. The AMP termination blocks on the right use the same special contacts and are typical configurations offered for use in telephone plant equipment.

Wire Bundling—*The AMP-TY wire bundling straps shown above* offer a reliable, economical method of holding wires together in a wiring harness. Easily applied by hand or by standard tools already available on the market, they exceed the holding strength of other similar ties.

Switches—*The switches shown above at right* are indicative of our emerging capability in a very large market relatively new to AMP. These slide, rotary, rocker, thumbwheel and keyboard switches are designed specifically for commercial and industrial electronic equipment. They are a natural outgrowth of our extensive development work on electrical connectors and programming systems of various types, and are designed for the very same customers that have been using our connection and programming products for years. They also utilize the same unique production skills—metal forming, plating, plastic molding, and assembly of small parts—that we rely on in the mainstream of our business. A new automotive switch is shown on page 5.

Flexible Etched Circuitry—*The flexible etched circuitry samples shown at right* evidence our entry into an entirely new area. After working for years on the connection of flexible flat cable, we saw a rising need for flexible etched circuitry in lengths, patterns, and quality not otherwise available to our customers. As circuit frequencies get higher and circuit densities greater, there is a growing demand for shielded or matched-impedance flexible circuitry which can minimize or eliminate "cross-talk." As an alternative in many cases to shielded wires



Switches for electronic equipment.

or twisted pairs or coaxial cable, this flexible circuitry can provide customers with appreciable savings in space and materials, as well as in the labor of terminating conductors. With an AMP application machine such as the one shown on page 10, a customer can very quickly and reliably terminate flexible cable. Often, however, if we are supplying the flexible circuitry in addition to the connectors, we will go one step further and provide the entire assembly with connectors attached—tested and ready to be plugged into place in the customer's equipment. An example of this circuitry in use is shown on pages 10-11.

Data Terminals—*The two data input units shown on the next page* are typical recent additions to our growing family of AMP remote-station data terminals and card readers. The unit on the left is a general purpose data collection terminal suitable for use in production or inventory control or similar information systems. Fixed data is entered by inserting punched tabulating cards or plastic badge cards. Variable data is entered on the keyboard. The unit on the right is designed for credit authorization systems in the petroleum and bank credit card fields and can “read” information from either the magnetic stripe or the embossed lettering on the card.



Flexible etched circuitry.

Medical Products—*The blood pack tool and clips shown below are a special kit supplied to the medical field. They provide a quick, reliable means of sealing a blood sample in the collection bag. This is one of our first ventures in the fast-growing market for medical supplies and devices. We are exploring other ways in which we can apply AMP's capabilities to special problems in other areas such as disposable supplies and instruments.*

Pipe Materials—*The pipe wrapping material shown below is one aspect of another new field we are exploring. Based on our experience with the connection and insulation of electrical conductors, we turned to the some-*

what similar problems involved with tubing and pipes. Our first product family was the AMP-FIT fittings for metal and plastic tubing and smaller diameter pipes shown on page 16. Quite recently, we developed unique materials for use on large pipes. One type is heat-shrinkable tape that is wrapped over a pipe joint to provide sealing, thermal insulation and abrasion protection. Another type can provide a pipe lining that is extremely tough and resistant to wear and corrosion. Upon application of heat, these materials expand or contract and adhere strongly to themselves and other surfaces. We are also studying new methods of joining pipe sections together.



Two recent data terminals.



AMP pipe wrapping material.

Crimping tool and clips to seal blood sample packs.





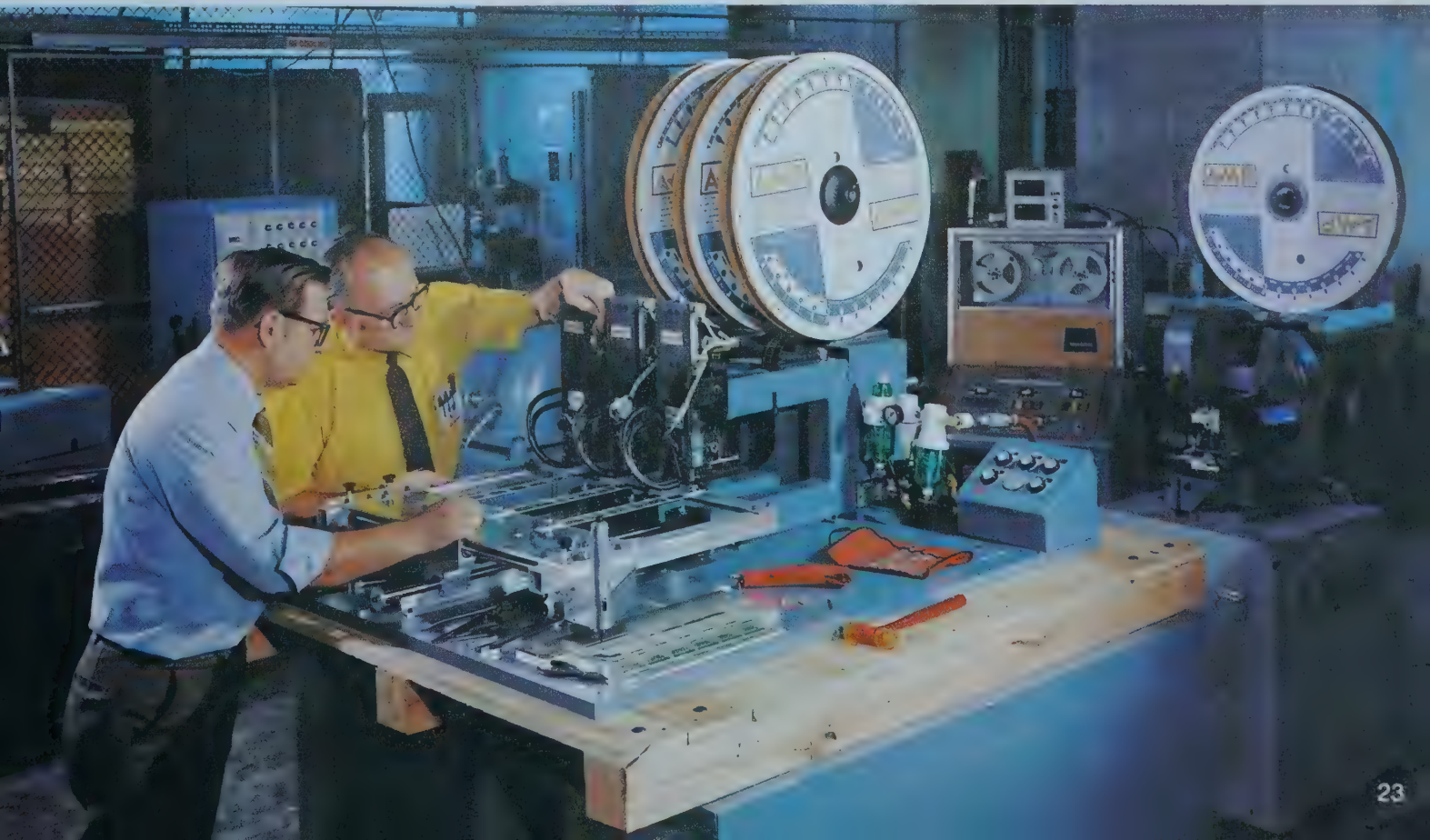
New portable tape-fed application machine.

AMP Econation Program

The machines shown here are among the many product application machines developed recently. Others are shown on the back cover. Historically, we have always been concerned with solving the customer's entire connection problem—i.e., providing the means of applying our product as well as the product itself. In recent years we have placed increasing emphasis on providing customers with more automation. This has meant a solid understanding of the needs of our customers, the build-up of a large staff of experienced machine development engineers, and the deployment of a sizeable force of field service engineers.

Along with the development of specific machines, there is the constant creation of new techniques or approaches that can be used broadly in our machine design work. Recent examples of this are new electronic feed control devices, extremely miniaturized applicator mechanisms, selectable dies, new crimp configurations, new wire stripping and wire handling devices, and new types of press mechanisms that are smaller and quieter. Machines of the Seventies will become much more sophisticated. They will be able to provide more automation through multi-head template guidance (e.g., pantagraph machine on this page), numerical controls (e.g., the **TERMI-POINT** machines on page 6 and the back cover), or computer controls.

Field service engineers adjusting a three-headed pantagraph application machine.



AMP INCORPORATED and

ASSETS	December 31	
	1971	1970
CURRENT ASSETS:		
Cash	\$ 5,540,000	\$ 5,320,000
Marketable securities, at cost, which approximates market .	28,261,000	12,991,000
Receivables	44,937,000	40,188,000
Inventories, at lower of cost, principally average, or market—		
Finished goods and work in process	24,064,000	24,255,000
Purchased and manufactured parts	18,461,000	19,421,000
Raw material	11,798,000	12,855,000
Total inventories	54,323,000	56,531,000
Prepaid expenses	4,322,000	3,633,000
Total current assets	137,383,000	118,663,000
PROPERTY, PLANT AND EQUIPMENT, at cost:		
Land	5,198,000	4,392,000
Buildings and leasehold improvements	36,621,000	33,317,000
Machinery and equipment	59,209,000	53,886,000
Machines and tools with customers	27,204,000	24,623,000
	128,232,000	116,218,000
Less—Accumulated depreciation	59,793,000	50,604,000
Property, plant and equipment, net	68,439,000	65,614,000
PATENTS, at nominal value	1,000	1,000
	<u>\$205,823,000</u>	<u>\$184,278,000</u>

The accompanying notes to the combined financial

Balance Sheets

Pamcor, Inc. & Their Subsidiaries

LIABILITIES AND SHAREHOLDERS' EQUITY

December 31

	1971	1970
CURRENT LIABILITIES:		
Bank loans and current portion of long-term debt	\$ 2,959,000	\$ 3,601,000
Foreign bank obligations	6,614,000	7,680,000
Accounts payable	12,913,000	11,367,000
Accrued expenses	12,358,000	10,224,000
Accrued taxes on income	16,065,000	13,984,000
Total current liabilities	50,909,000	46,856,000
 LONG-TERM DEBT	12,603,000	12,346,000
DEFERRED INCOME TAXES	1,908,000	1,038,000
INVESTMENT TAX CREDIT AND DEFERRED INCOME	2,118,000	2,629,000
Total liabilities	67,538,000	62,869,000
 SHAREHOLDERS' EQUITY:		
AMP Incorporated—		
Common stock, without par value—		
Authorized 15,000,000 shares,		
issued 12,480,000 shares	12,480,000	12,480,000
 Pamcor, Inc.—		
Common stock, par value \$1.00 per share—		
Authorized 20,000 shares, issued 20,000 shares	20,000	20,000
 Retained earnings	126,219,000	109,053,000
	138,719,000	121,553,000
 Less—Treasury stock, at cost	434,000	144,000
Total shareholders' equity	138,285,000	121,409,000
	<u>\$205,823,000</u>	<u>\$184,278,000</u>

ments are an integral part of these balance sheets.

Combined Statements of Income and Retained Earnings

AMP INCORPORATED and

For the Years Ended December 31

	1971	1970
NET SALES	\$239,648,000	\$225,827,000
COST OF SALES	139,215,000	127,062,000
Gross income	100,433,000	98,765,000
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES	54,500,000	52,769,000
Income from operations (after deducting straight-line depreciation of \$11,451,000 in 1971 and \$10,361,000 in 1970)	45,933,000	45,996,000
OTHER DEDUCTIONS, Net	789,000	1,163,000
Income before income taxes and gain on revaluation	45,144,000	44,833,000
INCOME TAXES	21,084,000	20,344,000
INCOME BEFORE GAIN ON REVALUATION	24,060,000	24,489,000
Per Endorsed Share (weighted average)	\$1.96	\$2.00
GAIN ON REVALUATION OF FOREIGN CURRENCIES, Net	965,000	—
NET INCOME	\$ 25,025,000	\$ 24,489,000
Per Endorsed Share (weighted average)	\$2.04	\$2.00
RETAINED EARNINGS, BEGINNING OF YEAR	109,053,000	91,674,000
LESS—	134,078,000	116,163,000
Cash dividends on common stock (64¢ and 58¢ per Endorsed Share)	7,859,000	7,110,000
RETAINED EARNINGS, END OF YEAR	\$126,219,000	\$109,053,000

Notes to Combined Financial Statements

(1) **PRINCIPLES OF COMBINATION:** The financial statements of AMP and Pamcor and their subsidiaries (all wholly owned) have been combined, since each company is owned beneficially by identical shareholders. Pamcor and its subsidiaries have no affiliates other than AMP and its subsidiaries. By trust agreement, Bankers Trust Company holds all of the Pamcor common stock for the benefit of AMP common shareholders whose certificates are endorsed to show they are entitled to a proportionate interest in the Pamcor common stock held in the Trust. This interest is not transferable separately.

Intercompany and affiliated company accounts and transactions, including unrealized profits in inventory, were eliminated in consolidating and combining the financial statements of AMP and Pamcor and their subsidiaries. Net income includes net income of Pamcor of \$1,166,000 in 1971 and \$1,468,000 in 1970. Cash dividends on common stock include dividends by Pamcor of \$614,000 in 1971 and 1970.

Combined Statements of Changes in Financial Position

ncor, Inc. & Their Subsidiaries

For the Years Ended December 31

	1971	1970
WORKING CAPITAL WAS PROVIDED FROM:		
Income before gain on revaluation	\$24,060,000	\$24,489,000
Expenses not requiring current outlay of working capital—		
Depreciation	11,451,000	10,361,000
Other	807,000	921,000
	36,318,000	35,771,000
Gain on revaluation of foreign currencies, net	965,000	—
Additions to long-term debt	2,245,000	3,390,000
Miscellaneous sources, net.	20,000	(215,000)
	39,548,000	38,946,000
AND WAS USED TO:		
Acquire plant and equipment	15,034,000	23,271,000
Reduce long-term debt	1,988,000	2,581,000
Pay cash dividends	7,859,000	7,110,000
	24,881,000	32,962,000
Increase in working capital	\$14,667,000	\$ 5,984,000
Working Capital Changes—Increases (Decreases):		
Cash and marketable securities	\$15,490,000	\$ (5,461,000)
Receivables	4,749,000	4,068,000
Inventories	(2,208,000)	5,970,000
Prepaid expenses	689,000	250,000
Bank loans and current portion of long-term debt.	642,000	454,000
Foreign bank obligations	1,066,000	(2,958,000)
Accounts payable and accrued expenses	(3,680,000)	929,000
Accrued taxes on income	(2,081,000)	2,732,000
Increase in working capital	\$14,667,000	\$ 5,984,000

(2) FOREIGN OPERATIONS: As a result of including the accounts of foreign operations, the combined financial statements as of December 31, 1971, include assets amounting to \$73,884,000 (\$57,405,000 current) and liabilities amounting to \$40,958,000 (\$32,505,000 current), or net assets of \$32,926,000. The additional income before gain on revaluation, as a result of including these foreign operations, amounted to \$12,003,000 for the year 1971 and \$11,986,000 for the year 1970.

The accounts of the foreign operations have been translated to U.S. dollars at appropriate rates of exchange. At December 31, 1971, the assets (except fixed assets) and liabilities of foreign subsidiaries were translated to U.S. dollars using new parity exchange rates established during December, 1971. The resulting gains and losses from the translation of net assets and from foreign currency hedging contracts are shown as an extraordinary gain, net of applicable income taxes.

Availability of remittances to the parent company is subject to currency restrictions of the various countries.

(continued)

Notes Continued

(3) **LONG-TERM DEBT:** Long-term debt at December 31, 1971, represents a $6\frac{1}{2}\%$ note of \$6,000,000 due to an institutional lender (including \$1,000,000 due within one year and classified as a current liability), foreign four-year term loans totaling \$4,563,000, and other debt of \$3,040,000.

The agreement covering the amount due to the institutional lender provides for repayment in equal annual installments over 6 remaining years or, at the option of AMP, over 3 years without penalty. This agreement contains restrictions with respect to additional borrowings, maintenance of minimum working capital and certain other items. Payment of cash dividends and the purchase of the Company's common stock, etc., are limited to \$71,433,000 at December 31, 1971, plus the entire net income of AMP and its domestic subsidiaries and Pamcor for subsequent periods.

(4) **STOCK PLUS CASH BONUS PLAN AND TREASURY STOCK:** All of the Endorsed Shares held in the treasury (1971—190,689; 1970—211,625) are reserved for the payment of stock bonuses under the incentive Stock Plus Cash Bonus Plan adopted by the Board of Directors. The number of shares to be distributed is determined by the appreciation in the market value of the Company's stock. During the year ended December 31, 1971, treasury stock was increased through the purchase of 13,100 shares at \$821,000 and decreased through the distribution under the provisions of the Plan by 34,036 shares at a cost of \$531,000. For awards granted before and outstanding on December 31, 1971, and

based on the market value as of that date, 147,000 shares would be distributed in the years 1972 through 1981.

(5) **EMPLOYEE RETIREMENT PLANS:** The Companies' employee retirement plans include insured contributory plans; trustee, non-contributory plans; and a single lump sum indemnity payment plan. Provisions aggregating \$3,282,000 in 1971 and \$2,464,000 in 1970 were made to cover current service cost plus amortization of past service cost. The Companies' policy is to fund pension costs accrued. The net assets of the plans exceed the present value of vested benefits as of December 31, 1971.

(6) **INCOME TAXES:** United States income tax returns of AMP for the years 1963 through 1965 have been audited by the Internal Revenue Service and deficiencies assessed which the Company paid in September, 1971. The Company is contesting one item of these deficiencies which could result in similar deficiencies of more substantial amounts being assessed for subsequent years, including 1966 through 1968 which have been audited but no report received. However, in the opinion of the Company and outside tax counsel the position taken by the Internal Revenue Service has little merit and the final determination of this issue for the years 1963 through 1971 will not have a materially adverse effect on its financial position or results of operations.

(7) **INVESTMENT TAX CREDIT:** The investment tax credit is being apportioned over the productive life of the equipment for which it was granted, consistent with prior years.

Auditors' Report

To the Shareholders and Boards of Directors
of AMP Incorporated and Pamcor, Inc.:

We have examined the combined balance sheet of AMP INCORPORATED (a New Jersey corporation) and PAMCOR, INC. (an affiliated Puerto Rican corporation) and their subsidiaries as of December 31, 1971, and the related combined statements of income and retained earnings, and of changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. We did not examine the combined financial statements of the foreign subsidiaries, which financial statements reflect total assets and income before gain on revaluation constituting 36% and 50% respectively, of the related combined totals. These financial statements were examined by other auditors whose report thereon has been furnished to us and our opinion expressed herein, insofar as it relates to the amounts included for the foreign subsidiaries, is based solely upon their report. We have previously examined and reported on the combined financial statements for the preceding year.

In our opinion, based upon our examination and the report of other auditors, the above-mentioned combined financial statements present fairly the combined financial position of AMP Incorporated and Pamcor, Inc. and their subsidiaries as of December 31, 1971, and the results of their combined operations and their combined changes in financial position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Philadelphia, Pennsylvania
February 16, 1972

Arthur Andersen & Co.

AUDITORS

DOMESTIC:
Arthur Andersen & Co.

INTERNATIONAL:
Price Waterhouse & Co.

STOCK

LISTED:
New York Stock Exchange

SHAREHOLDERS:
6,639

REGISTRAR

Morgan Guaranty Trust
Company of New York

30 West Broadway,
New York, N.Y. 10015

TRANSFER AGENTS

Bankers Trust Company
16 Wall Street, New York, N.Y. 10015

The Continental Stock Transfer Company
2853 Kennedy Blvd., Jersey City, N.J. 07306



AMP Headquarters—Eisenhower Blvd., Harrisburg, Pa.

AMP

INCORPORATED

HARRISBURG, PA.

Pamcor, Inc.

SAN JUAN, P.R.

OFFICERS

*J. D. BRENNER

President and Chief Executive Officer

WILLIAM C. LANGE

*Senior Vice President,
Director of Merchandising*

GERALD F. ENGLEHART

Vice President, International

S. WILSON POLLOCK

Vice President, Engineering and Research

*WALTER F. RAAB

Vice President and Treasurer

WILLARD A. SMITH

Vice President, Manufacturing

CLYDE RAYBURN

Controller

SOLON L. RHODE, JR.

Secretary, General Legal Counsel

DIVISIONAL VICE PRESIDENTS

(of AMP Incorporated only):

W. BENNETT CONNER

Industrial Sales

JOHN E. EBERLE

Connector and Component Products

HERMAN C. HAAS

Domestic Subsidiaries

JAMES E. MARLEY

Automatic Machine Products

KENNETH L. NEUSTROM

General Products

DIRECTORS

EXECUTIVE COMMITTEE

U. A. WHITAKER

Chairman of the Board

*S. S. AUCHINCLOSS

Vice Chairman of the Board

*C. J. FREDRICKSEN

Chairman of the Finance Committee

*J. D. BRENNER

President and Chief Executive Officer

F. H. BOLAND

*Industrial and Financial Consultant:
Director of Warner-Lambert
Company and Madison Fund, Inc.*

R. M. BRUMFIELD

*Chairman of Hurst Mfg. Corp.
(Retired Chairman of Potter &
Brumfield Division, American
Machine & Foundry Company)*

E. M. GREEN

*Chairman of the Board
Dauphin Deposit Trust Company*

F. C. HIXON

*President
Midland Investment Company*

J. T. SIMPSON

*Chairman of the Board
Harsco Corporation*

DIRECTORS EMERITUS

G. A. INGALLS

Retired Vice Chairman of the Board

C. L. KEISTER

*Retired Chairman of the Board
Dauphin Deposit Trust Company*

THE ANNUAL SHAREHOLDERS' MEETINGS

The annual shareholders' meetings of AMP Incorporated and Pamcor, Inc. are held the fourth Thursday of April. Formal notices, proxy statements and forms of proxy will be mailed on or about March 24, 1972 to shareholders of record on March 10, 1972 as to the April 27, 1972 meetings at 2:00 P.M. at 15 Exchange Place, Jersey City, New Jersey.

AMP OPERATING SUBSIDIARIES

(all wholly owned and
included in combined results)

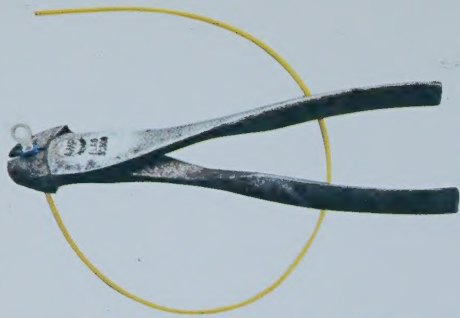
American Pamcor, Inc.,
Valley Forge, Pennsylvania
AMP of Canada, Ltd.,
Toronto, Canada

AMP de Mexico, S.A.,
Mexico City, D.F. Mexico
AMP S.A. Argentina,
Buenos Aires, Argentina
AMP do Brasil Ltda.,
São Paulo, Brazil

AMP de France,
Paris, France
AMP-Holland N.V.,
's-Hertogenbosch, Holland
AMP of Great Britain Limited,
London, England
AMP Italia S.p.A.,
Turin, Italy
AMP Deutschland G.m.b.H.,
Frankfurt, Germany
AMP Española, S.A.,
Barcelona, Spain
AMP Scandinavia A.B.,
Stockholm, Sweden

AMP (Japan), Ltd.,
Tokyo, Japan
Australian AMP Pty. Limited,
Sydney, Australia

*Member of Finance Committee



Ampeconomation
COST SAVINGS BY DESIGN WORLDWIDE

The first AMP crimping tool was made by grinding a notch in the jaws of a wire cutter pliers. From that simple beginning, AMP's application tooling evolved steadily during the Forties into a variety of hand and power tools and, after World War II, the industry's first strip-fed bench machines. Starting in the Sixties, rising labor rates, along with the creation of new types of conductors and new AMP products, have given rise to many new AMP machines. The machines shown here are among those developed in the past year.

- (a) High-speed assembly machine inserts contacts into relay bobbins.
- (b) Machine ultrasonically welds insulation housings.
- (c) AMPOMATOR machine terminates both ends of two different wires simultaneously.
- (d) Coaxial cable stripper.
- (e) Newest TERMI-POINT fully automatic, panel wiring machine.

